

MAP NO.: ASSESSMENT REPORT X  
105 D 3 PROSPECTUS X  
CONFIDENTIAL X  
OPEN FILE

DOCUMENT NO: 092873  
MINING DISTRICT: Whitehorse  
TYPE OF WORK: Geological  
Geochemical

REPORT FILED UNDER: M.J. Moreau Enterprises Ltd.

DATE PERFORMED: May 15, 1990

DATE FILED: Sept 11, 1990

LOCATION: LAT.: 60°08'N

AREA: Mt. Skukum

LONG.: 135°08'W

VALUE \$: 2,600

CLAIM NAME & NO.: CRAIG 1-26

WORK DONE BY: R. Hulstein of Aurum Geological Consultants Inc.

WORK DONE FOR: M.J. Moreau Enterprises Limited.

DATE TO GOOD STANDING:

REMARKS: Most significant mineralization found to date consists of argentiferous galena-sphalerite-quartz veins hosted by Cretaceous granodiorite intruded by Eocene rhyolite dykes. The property was mapped at 1:20 000. Twenty-two samples were collected for analysis. Results were encouraging. Samples collected in 1989 returned up to 61 opt Ag, with high lead and zinc values. Other mineralization on the property includes copper/moly veins, pyrite and copper staining in fractures and pyritiferous felsite.



**GEOLOGICAL AND GEOCHEMICAL  
ASSESSMENT REPORT ON THE  
CRAIG 1-26 CLAIMS**

**092873**

Whitehorse M.D., Yukon  
May 15, 1990

**CONFIDENTIAL**

**Claims:** Craig 1-26 (YB13673-98)


**Location:** 1. 60 km S of Whitehorse, Yukon  
2. NTS 105D/3  
3. Latitude 60° 08' N  
Longitude 135° 08' W

**For:** Mr. Jacques Moreau  
**M.J. Moreau Enterprises Ltd.**  
P.O. Box 5282  
Whitehorse, Yukon  
Y1A 4Z2

**By:** Roger Hulstein, B.Sc., FGAC  
**Aurum Geological Consultants Inc.**  
412-675 West Hastings Street  
Vancouver, B.C.  
V6B 1N2

September 5, 1990

This report has been examined by  
the Geological Evaluation Unit  
under Section 53 (4) Yukon Quartz  
Mining Act and is allowed as  
representation work in the amount  
of \$ 2,600.

*for*   
Regional Manager, Exploration and  
Geological Services for Commissioner  
of Yukon Territory.

## SUMMARY

M.J. Moreau Enterprises Ltd.'s Craig property consists of 26 contiguous claims totalling 540 hectares located in the Wheaton River valley 60 kilometers south of Whitehorse, Yukon Territory. The property is an attractive exploration target being located eight kilometers east of the Goddell gold-silver prospect, 15 kilometers east of Omni's Skukum Creek deposit and 18 kilometers east of the Mount Skukum mine (closed 1988).

Precious metals were first discovered on the ground in 1987 during a government mapping project of the Wheaton River area. The Craig 1-26 claims were staked in 1988 and subsequent work in 1989 and 1990 evaluated the original discovery and surrounding area on a reconnaissance scale.

The most significant mineralization found to date on the property consists of silver bearing galena-sphalerite-quartz veins hosted by Cretaceous granodiorite intruded by Eocene hypabyssal rhyolite porphyry dykes. Mineralization consists of six parallel, narrow (<0.20 meters each) shallow dipping veins over a total width of 2.5 meters. Grab samples from a trench excavated in 1989 returned up to 61.78 ounces per ton silver, 31.00% lead and 9.50% zinc. The geological setting and known mineralization is similar to other deposits found in the area thought to be related to the Mount Skukum volcanic complex.

Structural relationships and proximity to the Eocene Mount Skukum volcanic complex makes the area a favorable host for precious metal deposits. Further work is warranted and recommended.

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## INTRODUCTION

This report was prepared at the request of Jacques Moreau, owner of the Craig 1-26 mineral claims. Its purpose is to assess the property's economic potential and to satisfy assessment requirements of the Yukon Quartz Mining Act through a description of exploration work carried out by Aurum Geological Consultants Inc. on May 15, 1990.

The property is located approximately 60 kilometers south of Whitehorse, Yukon and is accessible by helicopter or by a five kilometer hike from the Becker Creek road (Figure 1).

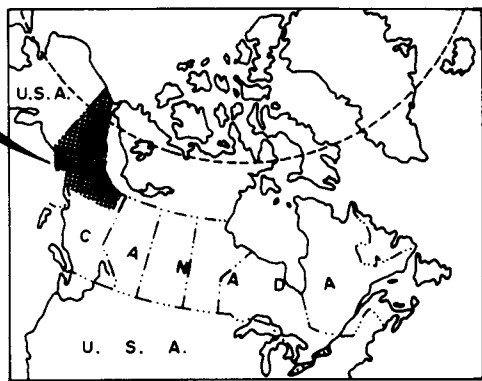
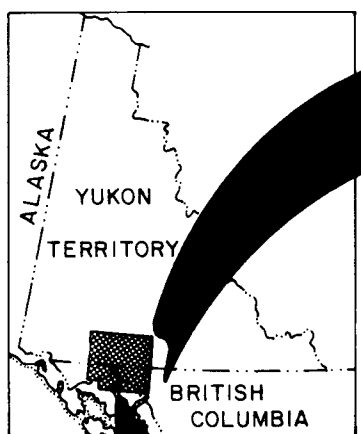
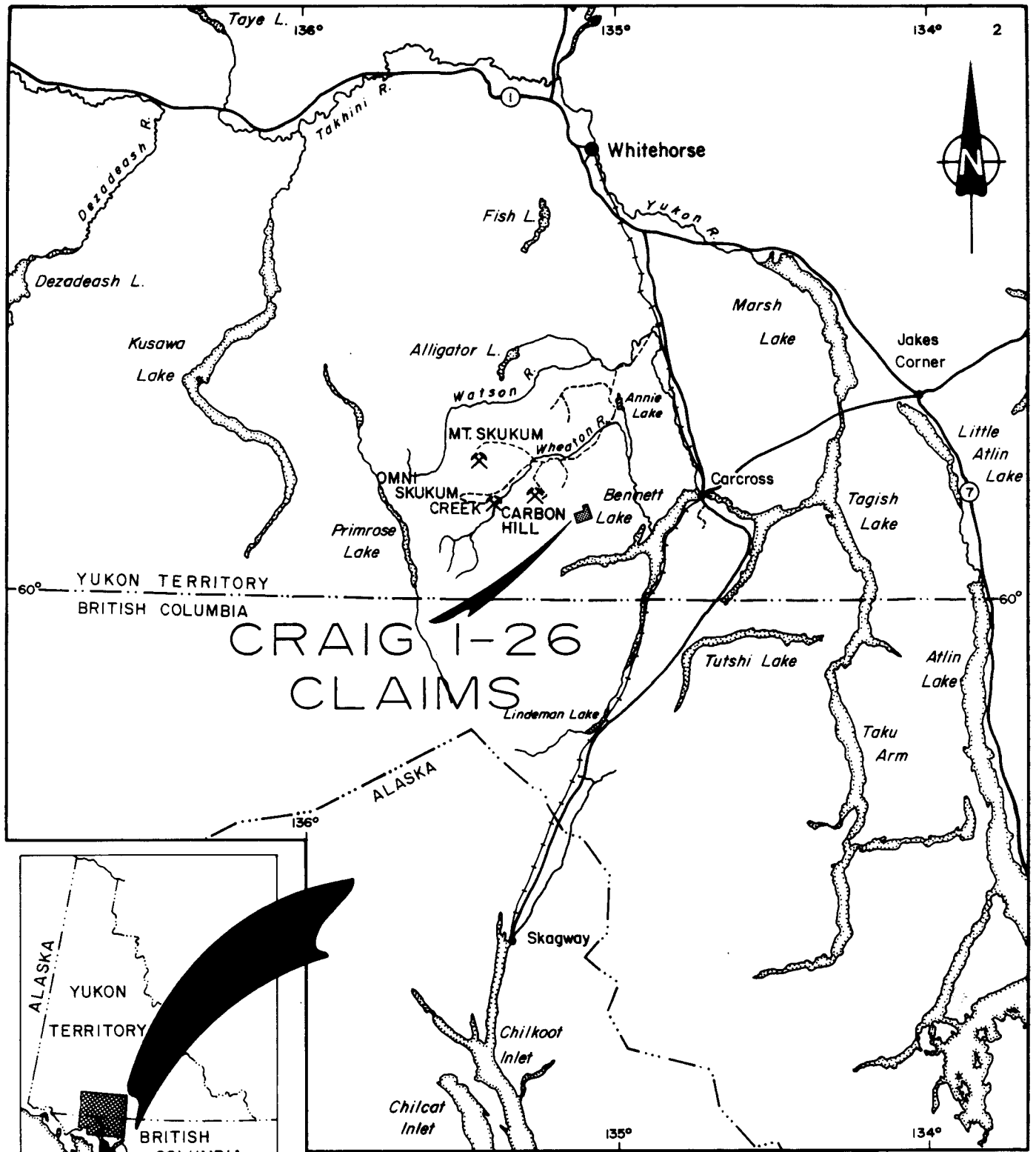
Exploration work carried out in 1990 consisted of geological mapping and geochemical soil and rock sampling for the purpose of locating precious metal and base metal deposits. This work was carried out by R. Hulstein, B.Sc., K. Pelletier, M.Sc. and S. Tufford of Aurum Geological Consultants Inc. Results of geochemical sampling and hand trenching carried out in 1989 by C. Hart, B.Sc. of Aurum Geological Consultants Inc. and M.J. Moreau Enterprises Ltd. has also been incorporated into this report. The contributions made by C. Hart and K. Pelletier towards this report are gratefully acknowledged by the author.

## LOCATION AND ACCESS

The Craig 1-26 claims are located in the Boundary Ranges of the Coast Mountains in southwestern Yukon. The property covers tributaries at the headwaters of Becker Creek, a northward flowing tributary of the Wheaton River. The approximate center of the claim block is located at 60° 08' North latitude and 135° 08' West longitude on NTS map sheet 105 D/3.

The town of Whitehorse, located 60 kilometers to the north, has twice daily jet service to southern Canada.

Access to the property is via helicopter based in Whitehorse. The Becker Creek 4WD road passes within five kilometers and connects to the Annie Lake gravel surfaced all-weather road. All terrain vehicles (ATV's) can be driven to within a kilometer of the property. Access to the property in May 1990 was gained by road and then a traverse along Becker Creek.



M.J. MOREAU ENTERPRISES LTD.	
CRAIG 1-26 CLAIMS	
WHITEHORSE MINING DISTRICT - YUKON TERRITORY	
LOCATION	
Aurum Geological Consultants Inc.	SEPT., 1990
DRAWN BY NH	Scale 1:1,000,000 FIGURE: 1

## HISTORY

Prospecting has been carried out in the Wheaton River area since the early 1900's, and has led to the discovery of numerous precious metal occurrences (gold, silver and related metals).

In 1981, a gold orebody was discovered by AGIP Canada Ltd. at Mt. Skukum, located approximately 20 kilometers to the northwest of the Craig property. This is the largest producer from a vein type deposit in the area, with a production of approximately 80,000 ounces of gold from 220,000 tons of ore (Basnett, 1989).

Omni Resources Inc. discovered a second potential gold-silver orebody at Skukum Creek in 1985. It is located seven kilometers southeast of Mt. Skukum and 15 kilometers west of the Craig claims. Drill indicated reserves are 821,000 tonnes grading 0.23 ounces per ton gold and 8.9 ounces per ton silver, including 166,000 tonnes averaging 0.575 ounces per ton gold and 16.5 ounces per ton silver (Omni 1988 annual report).

Silver bearing quartz-galena veins (the Craig showing) were discovered on ground now covered by the Craig claims during a government mapping project of the Wheaton River area in 1987 (Doherty and Hart, 1988). The Craig claims were staked by Mr. M.J. Moreau in May 1988 following public release of the information. In May 1989, a one day trenching and geochemical sampling program was carried out to evaluate the galena bearing veins and to fulfill assessment requirements for 1989.

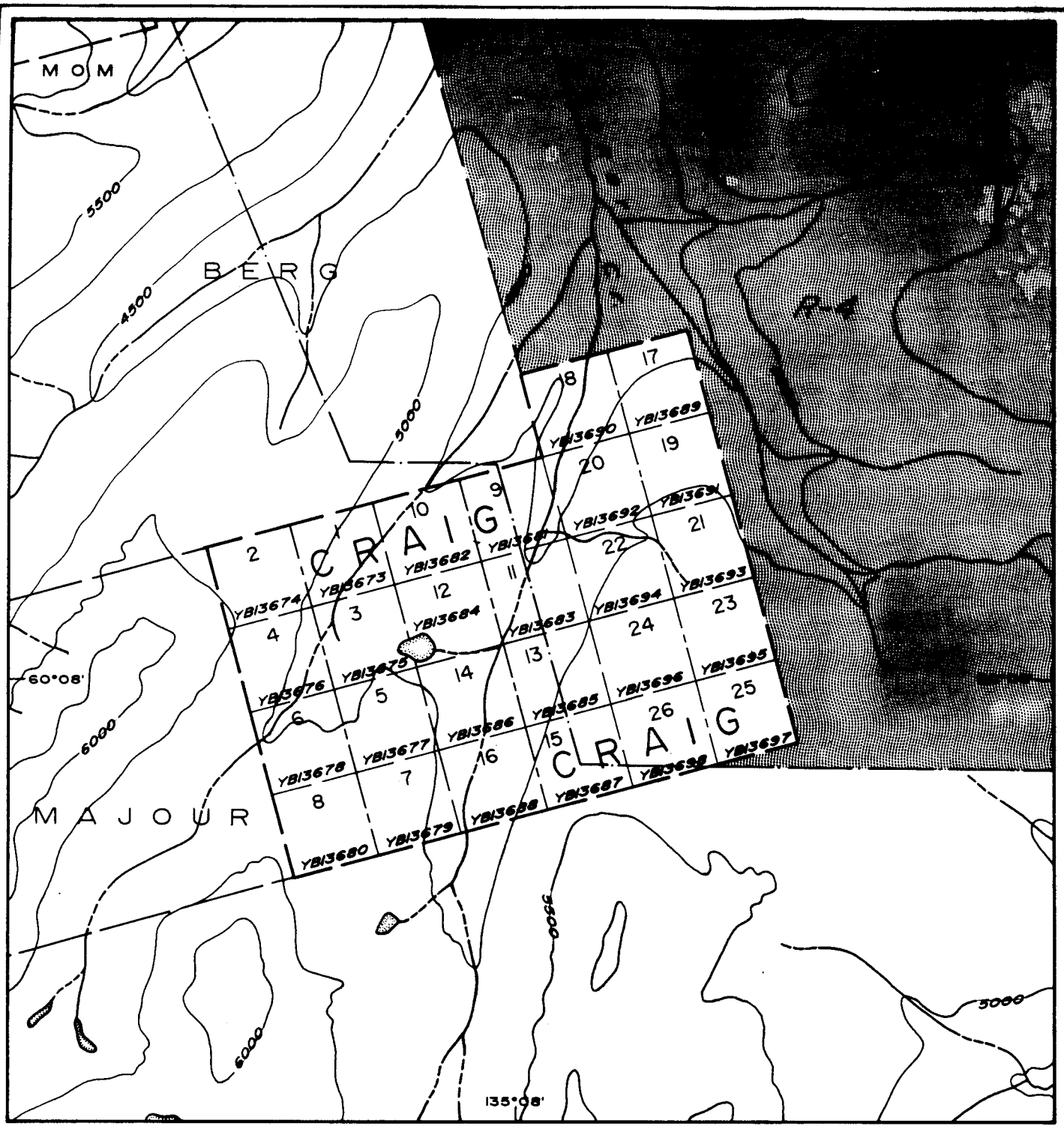
## PROPERTY

The property consists of 26 contiguous unsurveyed mineral claims covering a total of 540 hectares, staked in accordance with the Yukon Quartz Mining Act (Figure 2). The claims are shown on D.I.A.N.D. Quartz and Placer Map sheet 105 D/3. Due to snow cover at the time of the property visit claim posts were not visible. Claim data are as follows.







<u>Claim Name</u>	<u>Grant No.s</u>	<u>Recording Date</u>	<u>Expiry Date*</u>
Craig 1-26	YB13673-98	May 16, 1988	May 16, 1991

\* Subject to approval of 1990 assessment work.

No record of previous claim staking in this area is known to the author.



**LEGEND**

-  claim boundary
-  claim number
-  tag number
-  lands withdrawn from staking
-  creek, lake
-  elevation in feet, contour interval 5000ft.



M.J. MOREAU ENTERPRISES LTD.  
 CRAIG 1-26 CLAIMS  
 WHITEHORSE MINING DISTRICT - YUKON TERRITORY

**CLAIM MAP**

Note: adapted from D.I.A.N.D. map sheet 105-D-3,  
 revised March 23, 1989

Aurum Geological Consultants Inc. SEPT., 1990  
 NTS 105 D/3 DRAWN BY NH SCALE 1:30,000 FIGURE: 2

## CLIMATE, TOPOGRAPHY & VEGETATION

The climate in southwestern Yukon is one of contrast with short, moderately dry summers (40 cm annual precipitation) and long, cold winters with moderate snowfall. The exploration season extends from mid-May through to late September-early October.

The property covers a portion of an upland plateau dissected by tributaries of upper Becker Creek, resulting in moderate topography with approximately 300 meters of relief. The highest point of the property is 1670 meters above sea level.

Vegetation is typical of high alpine areas and consists of sparse mosses, grasses and alpine flowers on the slopes and plateaus with willows and 'buckbrush' restricted to the valley bottoms. Treeline in the area is generally at 1370 meter elevation.

## REGIONAL GEOLOGY

The Craig Property is situated at the eastern flank of the Coast Plutonic Belt (Figure 3). Cairnes (1912), Wheeler (1961), Doherty and Hart (1988), and Hart and Pelletier (1989) have adequately described the regional geology.

The Coast Plutonic Belt is composed of foliated and non-foliated granitoid rocks of predominantly Cretaceous age, flanked by older metamorphosed and unmetamorphosed sedimentary and volcanic strata. Granodiorite, granite and quartz diorite are characteristic of the composite plutons. Gabbro and syenite are rare. Irregular belts of lower Mesozoic to Paleozoic (and possibly Precambrian) metasedimentary and metavolcanic rocks are found as roof pendants.

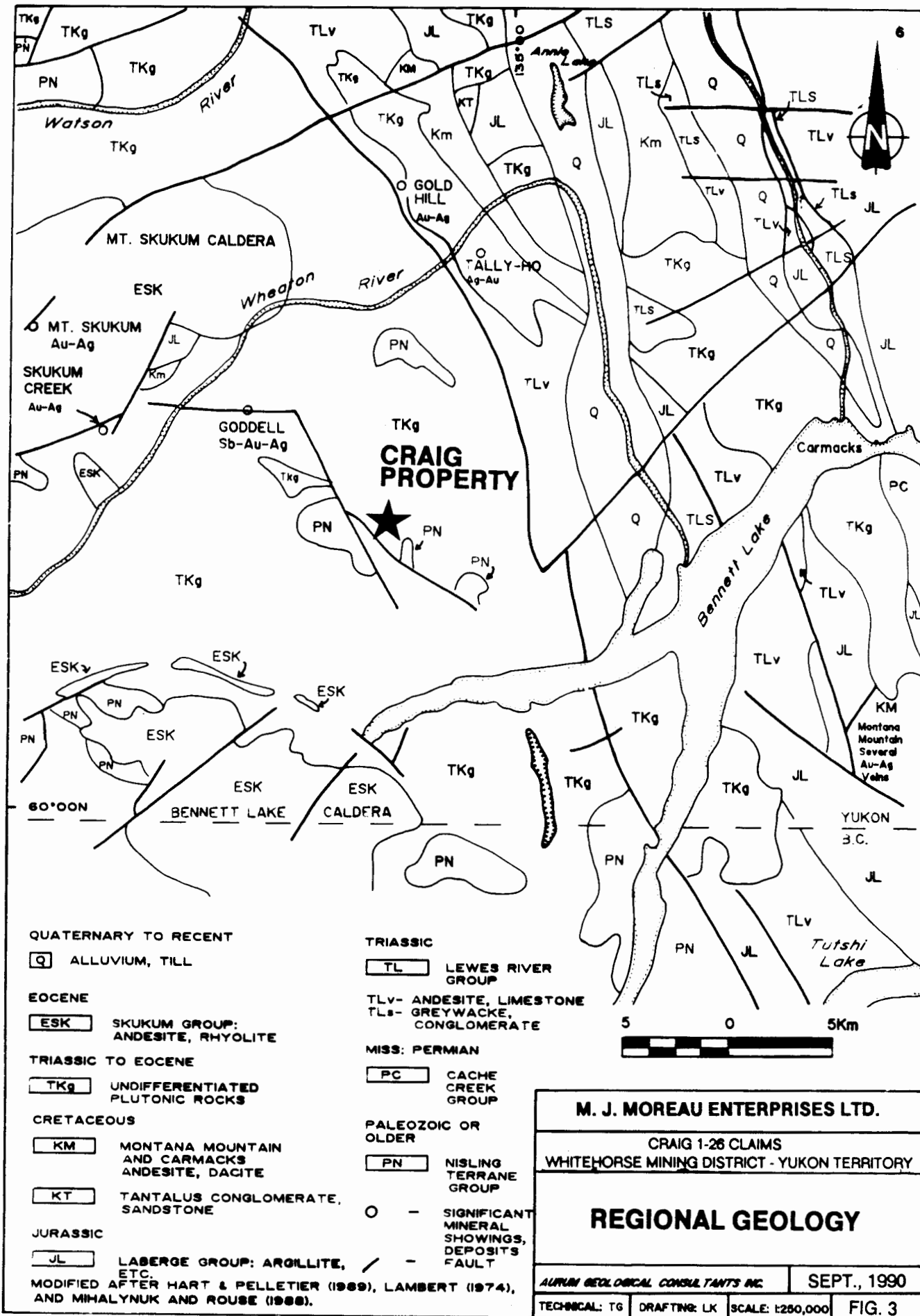
The Craig Property is located approximately 12 kilometers east of the Mount Skukum Volcanic Complex (Skukum Group), in part an Eocene (Pride, 1985) cauldron with associated bimodal volcanism. Extensive felsic dyke swarms are associated with this Eocene event and are spatially associated with most mineral deposits and occurrences in the Wheaton River valley area.

Faulting, lithologic attitudes and other regional trends are generally northwest, with some younger northeast structures. Most structurally controlled mineral deposits in the area are associated with pre-existing northeast trending fault zones now occupied by intermediate to felsic dykes. Many mineral occurrences, including the Skukum Creek and Goddell gold-silver deposits have elevated antimony and arsenic values.

## PROPERTY GEOLOGY

Rock outcrops are restricted to scarps bordering upland plateaus and stream cuts, and probably constitute less than 10% of the total property area. Glacial debris fill the valley bottoms.

The property is underlain by intrusive rocks of the Coast Plutonic Belt (Figure 4). The predominant rock unit is a coarse- to medium-grained, middle Cretaceous biotite-hornblende granodiorite (map unit Kgr) termed the Mt. Anderson granodiorite (Doherty and Hart, 1988). This unit is easily recognized by its well developed hornblende crystals. In the southwestern portion of the property, a medium-grained, Triassic biotite granite (map unit Tgd) with megacrystic potassium feldspar is exposed. The contact between these two units is along a north-northwest trending, east side down, normal fault. Both units are moderately sheared as indicated by foliation.



**QUATERNARY TO RECENT**

**Q** ALLUVIUM, TILL

**EOCENE**

**ESK** SKUKUM GROUP: ANDESITE, RHYOLITE

**TRIASSIC TO EOCENE**

**TKg** UNDIFFERENTIATED PLUTONIC ROCKS

**CRETACEOUS**

**KM** MONTANA MOUNTAIN AND CARMACKS ANDESITE, DACITE

**KT** TANTALUS CONGLOMERATE, SANDSTONE

**JURASSIC**

**JL** LABERGE GROUP: ARGILLITE, ETC.

MODIFIED AFTER HART & PELLETIER (1989), LAMBERT (1974), AND MIHALYNUK AND ROUSE (1988).

**TRIASSIC**

**TL** LEWES RIVER GROUP

TLv- ANDESITE, LIMESTONE  
TLs- GREYWACKE, CONGLOMERATE

**MISS: PERMIAN**

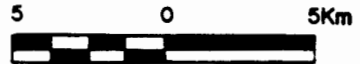
**PC** CACHE CREEK GROUP

**PALEOZOIC OR OLDER**

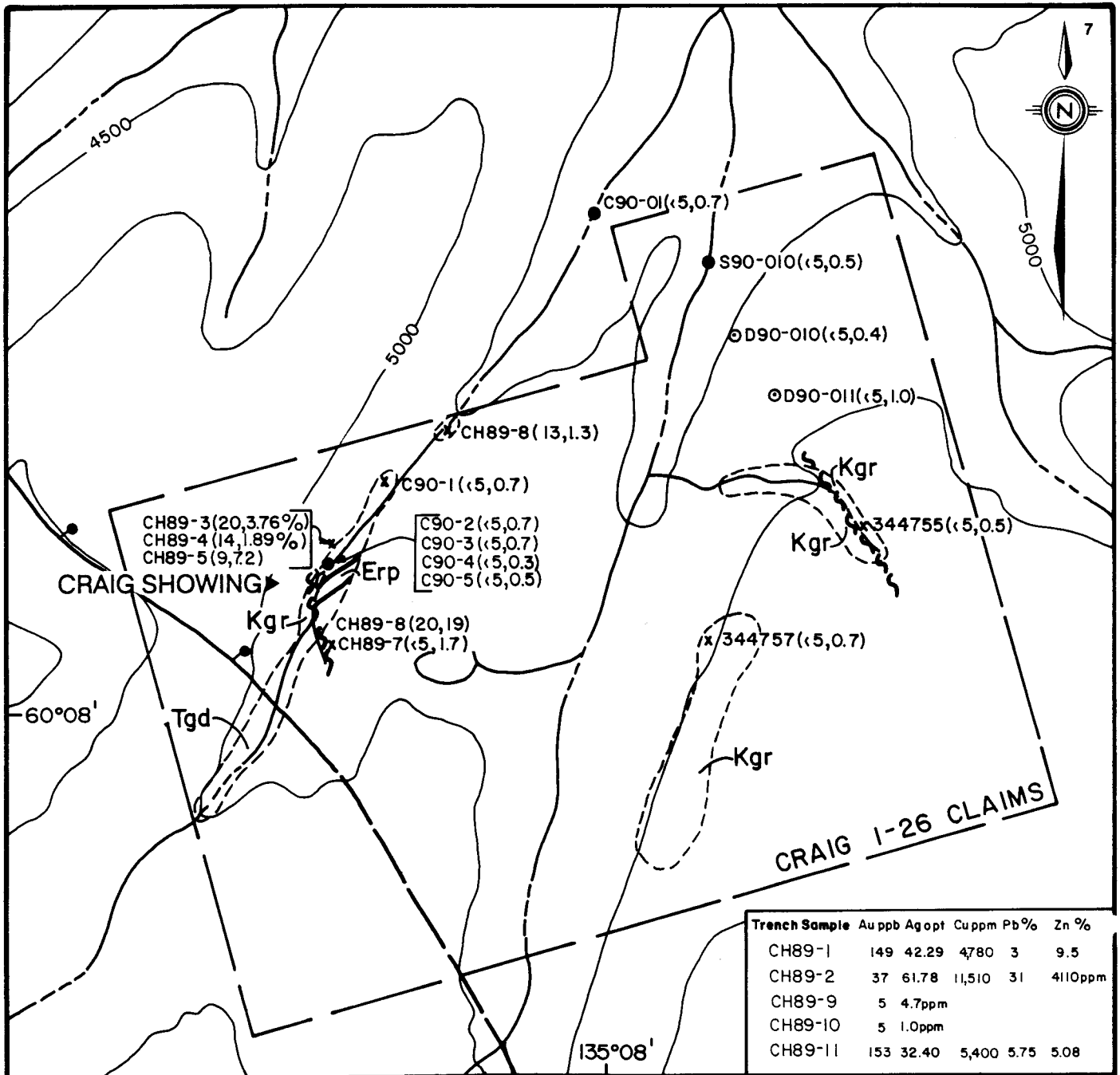
**PN** NISLING TERRANE GROUP

**O** - SIGNIFICANT MINERAL SHOWINGS, DEPOSITS

**/** - FAULT



<b>M. J. MOREAU ENTERPRISES LTD.</b>	
CRAIG 1-26 CLAIMS WHITEHORSE MINING DISTRICT - YUKON TERRITORY	
<b>REGIONAL GEOLOGY</b>	
AURUM GEOLOGICAL CONSULTANTS INC.	SEPT., 1990
TECHNICAL: TG	DRAFTING: LK
SCALE: 1:250,000	FIG. 3

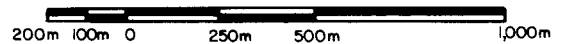


**LEGEND**

- Eocene
  - Erp Rhyolite porphyry
- Cretaceous
  - Kgr Biotite-hornblende granodiorite
- Triassic
  - Tgd Biotite granodiorite

- x Trench
- - - Approximate outcrop boundary
- | Normal fault (hatch on downdrop side)
- ~ Transcurrent fault
- Stream sample
- ⊙ Soil sample
- x Rock chip

- Geochemical results: sample no. ( Au ppb, Ag ppm)  
 - Trench: Length 6.2m / Width 1.2m / Depth 0.3 - 1.1m



**M.J. MOREAU ENTERPRISES LTD.**

**CRAIG 1-26 CLAIMS**

WHITEHORSE MINING DISTRICT - YUKON TERRITORY

**GEOLOGY MAP**

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*Aurum Geological Consultants Inc.*      Date: SEPT., 1990

N.T.S. 105-D/3	Drawn by: H.D.S.	Scale: 1 : 20,000	Figure No. 4
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A 50 meter wide, northeast-trending aphanitic, tan to mauve Eocene rhyolite dyke (map unit Erp) intrudes the Cretaceous granodiorite unit in the southwestern part of the property, near the main showing. These rocks are related to the Mount Skukum volcanic complex (Skukum Group) located 12 kilometers to the west.

Numerous mafic to intermediate dykes (1-2 meters wide) of unknown age intrude the granodiorite, with a dominant northeast trend

The Cretaceous granodiorite is similar in age and lithology to other granodiorites hosting mineralization (ie. Omni's Skukum deposit, located in the Wheaton Valley, and Whitehorse Copper deposits located near Whitehorse). The rhyolite porphyry is similar in nature to those found near Omni's Skukum deposit, as described by Doherty and Hart (1988).

### MINERALIZATION

Four types of mineralization have been found to date on the Craig Property: i) silver bearing, galena-sphalerite-quartz veins (the Craig showing); ii) copper-molybdenum bearing quartz veins; iii) disseminated pyrite and copper staining in fractures; and iv) pyritiferous felsite. All mineralization is hosted by hornblende granodiorite (Kgr).

The most significant mineralization type is silver bearing galena-sphalerite-quartz veins found at the Craig showing. Six parallel, north-trending, 20-30° west dipping veins, each up to 0.20 meters thick are found over a total width of 2.5 meters. The veins, as described by C. Hart (written communication, 1989), are composed of microcrystalline cockscomb and pale blue quartz with crudely banded, fine and medium grained galena, overgrown by small blebs of light brown sphalerite. Crystalline barite fills the centre of the thicker veins. Small silvery and dull grey minerals occur in the galena and may represent stibnite or sulphosalt minerals. The granodiorite host rock in the immediate area is variably silicified, iron stained with 2-5% finely disseminated pyrite (and pyrrhotite ?).

Due to snow cover on the property during the May 15, 1990 examination, the galena-sphalerite bearing quartz veins were not located. A total of eleven samples were collected on the property in 1990; seven rock samples, two stream sediment samples and two soil samples. All samples returned low values for gold, silver, copper, lead, zinc and arsenic except soil sample D90-011 which returned 1.0 ppm silver and 234 ppm lead. Soil sample D90-011 was collected from a small area of gossanous soil.

Mineralized grab samples collected by C. Hart on May 16, 1989 returned up to 61.78 ounces per ton silver (sample #CH89-2). Results and for copper, lead and zinc were up to 11,510 ppm (sample #CH89-2), 31.00% (sample #CH89-1) and 9.50% (sample #CH89-1) respectively. Analyses for gold returned a high of 153 ppb. Results for arsenic and antimony were highly anomalous with values up to 610 and 2,400 ppm respectively.

Veins similar to those at the Craig showing are found as splays off of larger stibnite-bearing quartz veins at the Goddell occurrence, seven kilometers to the northwest at Carbon Hill (Rucker 1988). Such veins have gained prominence recently with the discovery of significant gold intersections at depth (ie. 11.27 meters of 0.61 ounces per ton gold at 820 meter elevation above sea level; Northern Miner Nov. 14, 1988).

Approximately 100 meters north of the trenched Craig showing, a thin (10 cm), pale blue quartz vein with large (1-2 cm) blebs of massive chalcopyrite and small clusters of molybdenum is traceable in outcrop for 8 vertical metres. Grab samples (CH89-4, 5, & 6) from this vein returned

low values for gold (<20 ppb) and moderate values for, silver (<3.76 ounces per ton), copper (<3.26 %), lead (<4990 ppm), and zinc (<884 ppm).

Freshly exposed joint and fracture surfaces commonly are stained with copper and iron oxides. Associated chlorite and epidote alteration suggests the presence of a primitive or distal porphyry system. Rock samples of this material collected in 1990 returned uniformly low values.

Felsite(?) is exposed for 12 x 15 meters in the creek ravine adjacent to the trenched main showing. It is massive, rusty weathering, and extremely bleached and brecciated such that no original mineralogy is apparent. Pyrite is ubiquitous throughout this exposure. Thin, chalcedonic blue quartz stringers are not uncommon. Exposures are leached and lightweight or silicified and quite dense. A rock sample (CH89-9) of this material returned 4.7 ppm silver and low values for gold, lead and zinc.

## CONCLUSIONS AND RECOMMENDATIONS

The Craig property covers part of a Cretaceous hornblende granodiorite batholith intruded by Eocene rhyolite dykes. Mineralization discovered to date includes silver bearing, galena-sphalerite-quartz veins, which assayed up to 61.78 ounces per ton silver.

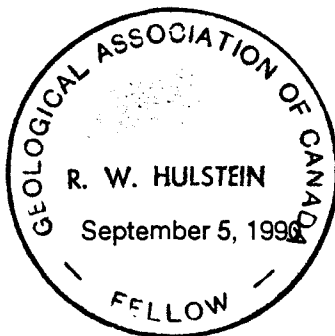
The geological setting and known mineralization is similar to other deposits found in the area. The silver-lead-zinc bearing quartz veins resemble those found at the Goddell occurrence, suggesting gold deposits may be present at depth. The rhyolite dykes found adjacent to the veins resemble those associated with mineralization at Omni's Skukum deposit; also hosted by a hornblende granodiorite.

The presence of a primitive or distal porphyry system is suggested by iron oxide and malachite stained joints and fracture surfaces associated with chlorite and epidote alteration.

Although the property has only been examined briefly, mineralization discovered to date indicates the property warrants further work.

The following is recommended:

1. Further exploration consisting of prospecting, geological mapping (1:5000 scale) and rock and soil geochemistry should be carried out over the entire property during the summer months. Special attention should be paid to alteration patterns and geological structures.
2. Remote sensing data (LANDSAT) and airphotos should be utilized to help identify potential exploration targets.
3. A grid should be established over the Craig showing and along strike for the purpose of systematic, geological mapping, soil sampling and ground geophysics (magnetics and VLF).
4. The galena-sphalerite-quartz veins at the Craig showing should be trenched along strike to determine their strike length, width and grade.
5. A claim survey is required to determine possible claim fractions and adjacent property boundaries.
6. Any further work (diamond drilling, HLEM geophysics) is contingent on results of the above work.



Respectfully submitted,

A handwritten signature in black ink, appearing to read "R. W. Hulstein".

Roger W. Hulstein, B.Sc.

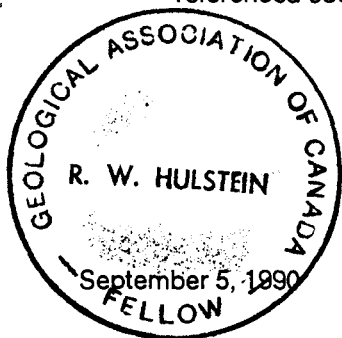
## REFERENCES

- Basnett, R., 1989: Epithermal Gold Veins of the Mount Skukum Gold Mine, South-Western Yukon Territory, *in* Alaska Miners Association, Juneau Branch, Abstracts of Professional Papers, 1989.
- Cairnes, D.D., 1912: Wheaton District, Yukon Territory, G.S.C. Memoir 31.
- Doherty, R.A. and Hart, C.J.R., (Aurum Geological Consultants Inc.) 1988: Preliminary Geology of Fenwick Creek (105D/3) & Alligator Lake (105D/6) Map Areas; Exploration and Geological Services Division, Yukon, Indian and Northern Affairs, Canada, Open File 1988-2.
- Hart, C.J.R. and Pelletier, K.S., (Aurum Geological Consultants Inc.) 1989: Geology of Carcross (105D/2) and part of Robinson (105D/7) map areas; Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 1989-1.
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- Pride, M.G., 1985: Preliminary Geological map of the Mt. Skukum Volcanic Complex, 105D/2, D/3, D/4, D/5. Exploration and Geological Services Division, Yukon, Indian and Northern Affairs, Canada, open file 1:25,000 scale map.
- Rucker, P.D., 1988: Fluid inclusion and  $d^{18}O$  Study of the Precious Metal-bearing Veins of the Wheaton River District, Yukon; unpublished M.Sc. thesis, University of Alberta, 157 p.
- Mihalynuk, M.G. and Rouse, J.N., 1988: Preliminary Geology of the Tutshi Lake Area, Northwestern British Columbia (105M/15); *in* Geological Fieldwork 1987, British Columbia Ministry of Energy, Mines and Petroleum Resources, Paper 1988-1, p. 217-231.
- Wheeler, J.O., 1961: Whitehorse Map Area, Yukon Territory, 105D, G.S.C., Memoir 312.

**STATEMENT OF QUALIFICATIONS**

I, ROGER W. HULSTEIN, hereby certify that:

1. I am a geologist with AURUM GEOLOGICAL CONSULTANTS INC., 412-675 West Hastings Street, Vancouver, British Columbia.
2. I am a graduate of Saint Mary's University, Halifax, with a degree in geology (B.Sc., 1981) and have been involved in geology and mineral exploration continuously since 1978.
3. I am a fellow of the Geological Association of Canada (F3572).
4. I have no direct or indirect interest in the properties of M.J. Moreau Enterprises Ltd.
5. I am the author of this report on the Craig property, Whitehorse mining district, Yukon, which is based on my personal examination of the ground on May 15, 1990 and on referenced sources.



Roger Hulstein, B.Sc., FGAC

## STATEMENT OF COSTS

### Assessment Work Valuation: Craig Property

#### 1. Geological and Geochemical

##### A. Fieldwork

R. Hulstein, B.Sc., of Whitehorse, Yukon. May 15, 1990; 1 day @ \$350.00/day:	\$350.00
K. Pelletier, M.Sc., of Whitehorse, Yukon. May 15, 1990; 1 day @ \$350.00/day:	350.00
S. Tufford, prospector, Whitehorse, Yukon. May 15, 1990; 1 day @ 300.00/day:	300.00

##### B. Geochemical Analyses

18 rock, 2 soil, and 2 stream sediment samples:	552.40
--	--------

##### C. Support Costs

Sample bags, flagging tape & thread:	25.00
Gasoline:	50.25
Truck Rental:	100.00
Radio and phone charges:	25.00

##### D. Research and Report Preparation

R. Hulstein, B.Sc.      2.5 days @ \$350.00/day:	700.00
K. Pelletier, M.Sc.    1.5 days @ \$350.00/day:	525.00
Drafting:	204.00

**\*Total Valuation of 1990 Assessment Work: \$3181.65**

**APPENDIX**  
**ANALYTICAL RESULTS**

Bondar-Clegg & Company Ltd.

136 Industrial Road  
Whitehorse, Yukon Territory Y1A 2V1  
Phone: (403) 667-6523  
Telex: 036-8-460

# Geochemical Lab Report



REPORT NOT CHECKED / COMPLETE

REFERENCE PRICE

CLIENT: ARCHA BIOLOGICAL CONSULTANTS INC.  
PROJECT: WOLF SILVER

SUBMITTED BY: UNKNOWN  
DATE PRINTED: 16-JUN-87

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	AG SILVER	3	0.02 OPT		FIRE ASSAY
2	AG SILVER	2	0.02 OPT	HF-HNO3-HClO4-HCl	ATOMIC ABSORPTION
3	CU COPPER	2	0.01 PCT		ATOMIC ABSORPTION
4	PB LEAD	3	0.01 PCT		ATOMIC ABSORPTION
5	ZN ZINC	2	0.01 PCT		ATOMIC ABSORPTION

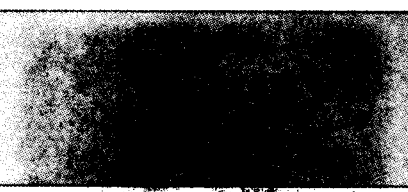
SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
R. ROCK OR BED ROCK	5	2 -150	5	AS RECEIVED, NO SP.	5

REPORT COPIES TO: MR. R. HULSTEIN

INVOICE TO: MR. R. HULSTEIN

BY: M.J. NOREAU

DATE: 16-JUN-87



Bondar-Clegg & Company Ltd.

136 Industrial Road  
Whitehorse, Yukon Territory Y1A 2V1  
Phone: (403) 667-6523  
Telex: 036-8-460

# Geochemical Lab Report

W

PROJECT: NONE GIVEN

PHASE: 1

ANALYST: [REDACTED]

ANALYST	UNITS	NO OPT	NO OPT	CO PCT	TA PCT	ZN PCT
R2 C489-1		4.17			5.00	7.50
R2 C489-2		6.78			31.00	
R2 C489-3			3.76	3.26		
R2 C489-4			1.89	2.47		
R2 C489-11		32.40			5.75	5.00

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

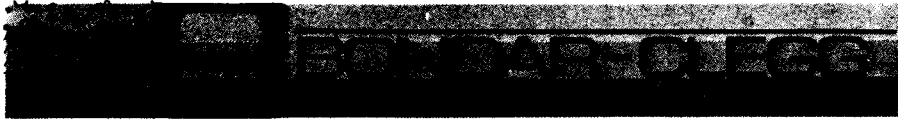
[REDACTED]

[REDACTED]

Bondar-Clegg & Company Ltd.

136 Industrial Road  
Whitehorse, Yukon Territory Y1A 2V1  
Phone: (403) 667-6523  
Telex: 036-8-460

# Geochemical Lab Report



REFERENCE INFO.

CLIENT: ARMA METROLOGICAL CONSULTING INC.

SUBMITTED BY: UNKNOWN  
DATE PRINTED: 7 JUN 89

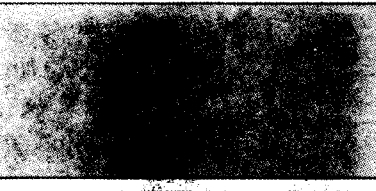
ORDER	ELEMENT		NUMBER OF ANAL YSCS	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	AU	GOLD - FIRE ASSAY	11	5 PPB	FIRE-ASSAY	FIRE ASSAY AA
2	AG	SILVER	11	0.1 PPM	HNO3-HCL HOT EXTR	ATOMIC ABSORPTION
3	CU	COPPER	6	1 PPM	HNO3-HCL HOT EXTR	ATOMIC ABSORPTION
4	PB	LEAD	6	2 PPM	HNO3-HCL HOT EXTR	ATOMIC ABSORPTION
5	ZN	ZINC	6	1 PPM	HNO3-HCL HOT EXTR	ATOMIC ABSORPTION
6	AS	ARSENIC	8	1 PPM		
7	SB	ANTIMONY	8	2 PPM		X-RAY FLUORESCENCE

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
R ROCK OR BED ROCK	11	2 -150	11	CRUSH,PULVERIZE -150	11

REMARKS: ASSAY OF HIGH AC, CU, PB, AND ZN TO FOLLOW ON  
UB9-01931,4

REPORT COPIES TO: MR. R. HULSTEIN  
M.J. MOREAU

INVOICE TO: MR. R. HULSTEIN





**Bondar-Clegg & Company Ltd.**  
 130 Pemberton Ave.  
 North Vancouver, B.C.  
 V7P 2R5  
 (604) 985-0681 Telex 04-352667



**Geochemical  
 Lab Report**

REPORT: V90-36094.0 ( COMPLETE )

REFERENCE INFO:

CLIENT: AURUM GEOLOGICAL CONSULTANTS INC.  
 PROJECT: 40

SUBMITTED BY: R. HUISTEIN  
 DATE PRINTED: 31-MAY-90

ORDER	ELEMENT	NUMBR OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au 10g Gold - Fire Assay	11	5 PPM	Fire-Assay	Fire Assay AA
2	Ag Silver	11	0.2 PPM	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
3	Cu Copper	11	1 PPM	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
4	Pb Lead	11	2 PPM	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
5	Zn Zinc	11	1 PPM	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
6	Mo Molybdenum	11	1 PPM	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
7	Ni Nickel	11	1 PPM	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
8	Co Cobalt	11	1 PPM	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
9	Cd Cadmium	11	1 PPM	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
10	Bi Bismuth	11	5 PPM	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
11	As Arsenic	11	5 PPM	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
12	Sb Antimony	11	5 PPM	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
13	Fe Iron	11	0.01 PCT	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
14	Mn Manganese	11	0.01 PCT	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
15	Te Tellurium	11	10 PPM	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
16	Ba Barium	11	5 PPM	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
17	Cr Chromium	11	1 PPM	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
18	V Vanadium	11	1 PPM	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
19	Sn Tin	11	20 PPM	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
20	W Tungsten	11	10 PPM	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
21	La Lanthanum	11	1 PPM	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
22	Al Aluminum	11	0.02 PCT	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
23	Mg Magnesium	11	0.05 PCT	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
24	Ca Calcium	11	0.05 PCT	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
25	Na Sodium	11	0.05 PCT	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
26	K Potassium	11	0.05 PCT	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
27	Sr Strontium	11	1 PPM	HNO3-HCl Hot Extr.	Ind. Coupled Plasma
28	Y Yttrium	11	1 PPM	HNO3-HCl Hot Extr.	Ind. Coupled Plasma

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Geochemical  
 Lab Report

DATE PRINTED: 31-MAY-90

PROJECT: 40

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REPORT: V90-36094.D

SAMPLE NUMBER	ELEMENT UNITS	Au 10g PPB	Ag PPM	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ni PPM	Co PPM	Cd PPM	Bi PPM	As PPM
S1 C90-01		<5	0.7	59	27	74	12	18	10	2	6	32
S1 D90-010		<5	0.4	22	20	55	4	9	6	<1	7	14
S1 D90-011		<5	1.0	234	30	71	2	6	10	<1	15	7
S1 S90-010		<5	0.5	64	20	85	4	9	8	<1	5	16
R2 C90-1		<5	0.8	27	12	38	<1	32	13	<1	10	11
R2 C90-2		<5	0.7	41	14	33	4	4	1	<1	77	13
R2 C90-3		<5	0.7	29	23	22	9	3	2	<1	271	10
R2 C90-4		<5	0.3	15	11	13	15	2	1	<1	113	6
R2 C90-5		<5	0.5	35	25	9	19	2	1	<1	248	7
R2 344755		<5	0.5	38	12	36	<1	3	7	<1	13	8
R2 344757		<5	0.7	17	8	45	1	3	8	<1	7	11



DATE PRINTED: 31-MAY-90

PROJECT: 40

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REPORT: V90-36094.D

SAMPLE NUMBER	ELEMENT UNITS	Sb PPM	Fe PCT	Mn PCT	Te PPM	Ba PPM	Cr PPM	V PPM	Sn PPM	W PPM	La PPM	Al PCT
S1 C90-01		<5	5.10	0.05	12	298	28	89	<20	<10	37	1.47
S1 D90-010		<5	3.47	0.04	10	125	17	53	<20	<10	15	1.45
S1 D90-011		<5	4.08	0.07	11	630	11	55	<20	<10	23	2.75
S1 S90-010		<5	5.64	0.05	11	288	23	82	<20	11	25	1.39
R2 C90-1		<5	3.78	0.09	10	1718	27	37	<20	<10	10	2.18
R2 C90-2		<5	4.14	0.03	<10	142	38	34	<20	110	8	1.10
R2 C90-3		<5	5.96	0.02	14	134	19	22	<20	339	7	0.75
R2 C90-4		<5	4.17	<0.01	<10	117	27	18	<20	17	6	0.60
R2 C90-5		<5	3.78	<0.01	<10	131	37	14	<20	53	6	0.48
R2 344755		<5	3.02	0.05	<10	68	29	52	<20	<10	16	2.13
R2 344757		<5	3.61	0.07	<10	1870	25	13	<20	<10	21	0.62



REPORT: V90-36094.0

DATE PRINTED: 31-MAY-90

PROJECT: 40

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SAMPLE NUMBER	ELEMENT UNITS	Mg PCT	Ca PCT	Na PCT	K PCT	Sr PPM	Y PPM
S1 C90-01		0.77	0.93	<0.05	<0.05	90	11
S1 D90-01U		0.39	0.30	<0.05	<0.05	41	6
S1 D90-011		0.99	1.54	<0.05	0.08	134	10
S1 S90-010		0.66	0.79	<0.05	<0.05	83	10
R2 C90-1		1.23	2.01	<0.05	0.18	260	12
R2 C90-2		0.92	0.38	<0.05	0.17	43	4
R2 C90-3		0.46	0.30	<0.05	0.23	29	4
R2 C90-4		0.25	0.09	<0.05	0.37	25	3
R2 C90-5		0.14	0.09	<0.05	0.31	21	4
R2 344755		0.80	3.12	<0.05	0.06	121	6
R2 344757		0.34	4.52	<0.05	0.27	146	8

**APPENDIX**  
**SAMPLE DESCRIPTIONS**

Date: 19 May 89

Project: NOCREAU / CRAIG

Area: Upper Becker Ck.

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Sample No.	Location	Description	Attitude	Width	Analytical Results						
					Au Ppb	Au gpt	Pb %	Zn %	Cu ppm	Sb ppm	As ppm
CH 89-1	Main showing	Qtz, carbonate, (Ba), galena, sphalerite vein	0-20/20W		149	42.2 gpt	3.0 %	9.5 %	4780 ppm	1900 ppm	240 ppm
89-2	Main showing	Coxscomb Qtz, fine + coarse grained galena + minor sphal within a Ba, and silver minerals	0-20/20W	Selected sample	37	61.78 gpt	3.1 %	4110 ppm	11510 ppm	2400 ppm	610 ppm
89-3	100m north of showing	Pale grey Qtz vein, malachite, staining, minor rust 2% cpy, minor moly(?) or b.g. gn.	chip 150/30S	0.25m	20	3.76 gpt	4990 ppm	884 ppm	3.26 %	-	-
89-4	"	As above with up to 5% cpy in blebs in Qtz. 8m long vein	150/30S	g14b	14	1.89 gpt	1310 ppm	333 ppm	2.47 %	-	-
89-5	"	Upper portion of same vein, mal. staining in Qtz, less sulphid	150/30S	g14b	9	17.2 ppm	359 ppm	120 ppm	9610 ppm	-	-
89-6	120m north of showing	Green, black + red (hematitic) ct. vein with Qtz + 1% g? - looks like cpy. but rusty ox <sup>n</sup> + no mal.	090/20N	g14b 7cm	20	19.0 ppm	-	-	-	27	7
89-7	100m down from fork	Grey-white coarse relictized Qtz in shear zone, no sulphides but dark layers in Qtz, 6m long		15cm	<5	1.1 ppm	-	-	-	2	10





